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Dakota Zephyr

South Dakota State College Extension Service, Brookings

The Soil Is the Basis of Civilization; Destroy It and You Destroy All

November 17, 1943

District Acreage Tops 9 Million

DISTRICT TO FIGHT FIRES

Kadoka, S. D.—Realizing that every prairie fire is a fire for Hitler, the Jackson County Soil Conservation district has established a county-wide fire control organization. This fire control setup is for the purpose of more effectively preventing, reporting and controlling prairie fires and other types of fires. Cooperating organizations include the —Jackson County Soil Conservation district, the towns of Kadoka, Belvidere and Cottonwood, the Sandstone and Indian Creek Grazing associations and the Milwaukee railroad.

Each of these groups makes available the equipment and supplies which they have on hand for the purpose of fire prevention and suppression. The district furnishes fire pumps and fire swatters. The district supervisors also select neighborhood fire leaders.

Towns Furnish Equipment

The towns of Kadoka, Belvidere and Cottonwood furnish water-trucks, fire trucks, tanks, barrels, volunteer fire-fighters and any other equipment which the towns have available. They also make arrangements with the telephone operators for reporting fires and requesting assistance.

The grazing associations construct fire guards and keep those fire guards well maintained. They also supply equipment and personnel they have available and make available shelter and storage space for equipment. The railroad plows fire guards and keeps fire equipment available.

Grass is the principal asset in the Jackson County district. To protect this grass from fire has now become an active part of the district's program.

Irrigated Spuds Go 220 Bushels; Dam Provides Reservoir

Clearfield, S. D.—Mr. Doris Tourney of Clearfield has just completed another year of successful irrigation. He uses a dam for water storage and pumps water on his garden and cropland. His irrigated potatoes made 220 bushels per acre which is a good yield in that area.

His irrigated garden provided plenty of garden produce for his own use and a surplus for sale. His irrigation project furnished him food for his livestock and food for his family.

Tourney is continuing his soil conservation work by retiring another 40 acres of his dry land to crested wheatgrass. He has 26 acres of crested wheatgrass which was seeded two years ago and is now producing abundant hay and forage.

Quarter S. D. Farm Land In Soil District Program

Three new soil conservation districts have been organized and 12 additions to old districts have been made in South Dakota so far in 1943. There are now 32 districts located in part or all of 34 counties, with a land area of 9,324,121 acres, or about one-fourth of all land in farms in the state. About 23,500 farmers and ranchers are within district boundaries and over 7,000 farmers or one out of every ten farmers in the state are cooperating with their soil conservation districts in an organized program of erosion control, conservation of soil and moisture resources and wise land use.

Moves Fences and Starts Over

Spearfish, S. D.—In the spring of 1943, the Lawrence-Butte Soil Conservation district helped Ralph Vorhees, Spearfish, lay out some of his farm land on the contour. Ralph says he doesn't know how much but he is sure his yields were increased by contouring. Ralph wants the rest of his farm land laid out on the contour this fall.

New Districts Organized

Districts organized this year are in Haakon, Jerauld and northern Charles Mix counties. Additions already made are in districts located in Roberts, Jackson, Todd, Gregory, Lincoln, Pennington, Hand, Butte, Minnehaha, Lyman and Brule counties. One-third of the acreage in districts is additions made in 18 districts.

The district in Jerauld county covers the entire county and is the fifth county to be completely in a district. The others are Sanborn, Roberts, Jackson and Bon Homme.

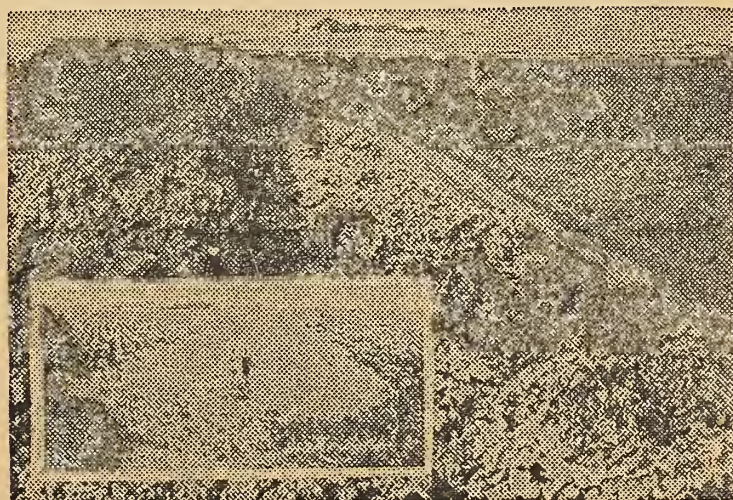
Hearings on a second addition to the Rosebud district in Todd county have been held and a referendum has been authorized by the State Committee in the Elk Creek district in Meade county.

Petitions requesting a hearing in December on a proposed district in Yankton county have been completed. The State Committee has been informed that additions in the near future are contemplated in districts in Clay, Lincoln, Minnehaha, Turner, Day, Marshall, Spink and Butte counties.

Supervisors of the Haakon district include: Emanuel Bierwagon, Miles-ville, chairman; Guy Waldo, Ottumwa; Nels Eckvald, Midland; Leo Sta-

Continued on Page 2

Ditch Stops Flood on 500 Acres



This drainage ditch and dike is a mile long. It keeps water off from 500 acres of bottom land on the Overgaard, Anderson and Rist farms, two miles north of Centerville. Formerly all of this land was flooded during each rainy season. The insert shows a completed drainage ditch seeded to grass on the Harry Wuertz farm, one mile west of Davis. These farmers are all cooperators with the Turner County district.

PLAN TO RESTORE IDLE SECTION

District Rents Land to Restore For Recreation

Huron, S. D.—The supervisors of the Carpenter Soil Conservation District leased a section of land to develop for recreational and wildlife purposes. Most of this section at one time had been cultivated but when the dry years of 1933 and 1934 came it blew badly, so the area was abandoned and it grew to weeds. The district intends to seed this area to grass and trees. A field of 50 acres of crested wheatgrass was seeded in the spring of 1942.

This land had not been farmed for 8 or 10 years, and had been allowed to grow to weeds.

No other tillage practices were used except to seed the grass. A disc semi-deep furrow drill was used. The area was seeded at the rate of four pounds per acre. A very good stand of grass was secured. Considerable weeds came up in the planting during the summer.

In the spring of 1943 a soil packer was secured and the field was rolled, breaking down all the old weeds that had come up the preceding summer which left the field clean. The grass went to seed and about July 29 it was cut and bound with a grain binder. The bundles were shocked up in good shape.

Make Profit on Grass Seed

The grass was not threshed until September 22. The seed was discolored a little from the weather but otherwise was in very good shape. From the 50 acres, 8,770 pounds of seed were obtained. The seed was brought to Huron and cleaned with a large fanning mill for 1 cent per pound gross weight. About 1,070 pounds of dirt, weed seed, chaff and light seed were cleaned out, leaving approximately, 7,700 pounds of clean seed.

With the sale price of crested at 17 cents per pound, the district supervisors could realize about \$1,386. The cost of harvesting, cleaning, etc., was about \$200, leaving the district \$1,186 profit.

The district supervisors intend to sell most of this seed to cooperators of the district at a fair price in order to get more abandoned land and land that is unsuitable for farming back into grass.

Contour Farming Pays

Weed patches in which the plants are separated by bare soil offer little protection against erosion.

'Timber-r-r!' Heard At Big Stone Lake?

Sisseton, S. D.—Paul Bunyan is a past character, but if plans materialize the cry of "timber" may be heard through the coulees and shores of Big Stone lake.

With the soaring prices of lumber, several farmers have asked for assistance in woodland management. Ambrose Nielsen of Lake township has made the necessary preparations to buy and operate a small portable sawmill.

The native timber will furnish logs suitable for dimension and rough lumber for corncribs, machine sheds, lean-to and other small farm buildings. The scraps will furnish the farmer with fuel wood.

All woodlands that are to be cut will have a management plan made including all phases of management for an indefinite period of time.

Contour Farming Pays

"A Chip off Old Block" Goes In Reverse in Day District

Webster, S. D.—The old saying—"a chip off the old block" was rather reversed the other day when Carl Stavig of Roslyn came into the office of the Day County Soil Conservation district and asked Paul C. Underwood, work unit conservationist, for some help in laying out contour guide lines on a field that was washing badly.

Stavig said, "You know, my father and I thought my brother, Gordon Stavig, was slipping when he planted those crooked rows of corn last spring. When I helped my brother cut the corn for the silo I noticed that the field had been washing in only one old gully and all the rest of the gullies had leveled off completely in spite of the heavy rains we had last summer. One gully that had previously been almost four feet deep is completely healed over and is producing a crop. Not only that," Mr. Stavig continued, "the corn made a very good growth and was fairly clean of weeds in spite of a weedy season."

Mr. Stavig concluded that he rented the land he farmed from his father and after questioning all summer whether contour farming was practical or whether it would prevent soil washing, they were convinced that they would try it on a 30-acre piece of land next year. He will operate all the cultivated land possible using this practice.

Two 80 Rod Gullies Divide Field in Three

Lucas, S. D.—Two gullies, approximately 80 rods long cut through a field on the farm owned by J. W. Smith here. The two main gullies divided the field into three parts, as far as farming operations were concerned. This meant a lot of point rows where it was necessary to turn around because of the gullies or pretty rough going where it was still possible to cross them.

Mr. Smith decided that perhaps grassed waterways such as are used in other parts of the country might also be used on his farm to control the gullies. The ditches were bladed in and a channel rounded about 25 feet wide, which was seeded to a mixture of crested and western wheatgrass at a rate of about 25-30 pounds per acre.

Temporary dikes were made around the newly prepared channel to exclude the water until the grass had become established. The blading and seeding were done in the fall of 1942 and by midsummer of 1943, a fine stand of grass was established. The field in which the waterways are located is also farmed on the contour.

Contour Farming Pays

Contours Have New Use—Save Tractor Clutch

Sioux Falls, S. D.—In the spring of 1943, Gilbert Kringen requested assistance from the Minnehaha Soil Conservation district in laying out contour lines on 40 acres of hilly ground. The lines were laid out and Kringen carried on his first contour operations on this field.

"I soon found that it was much easier on equipment by operating on the contour," said Kringen. "I never had to change gears at all except when finishing up the field. I just about had to figure a new clutch for my tractor each year after farming that forty. This year it was like farming level bottom land."

During the summer Kringen sold that "40" acres to Mr. Ed Pruitt. Pruitt asked Kringen to explain how to use the contour guide lines and was referred to the district technicians. The technicians went to the field with Mr. Pruitt and helped him to get started plowing. He plowed the 40 acres in four days with a 10-20 tractor in fourth gear.

District Acres Pass 9 Million

Continued from Page 1

ben, Milesville; Jay C. Williams and Elbert Bentley, county agent, secretary.

In Jerauld county the district supervisors are: Roy Eagle, chairman; George Hodgson, vice chairman; Fred Dunham, treasurer; Chris Christenson and Henry Shreder, all of Wessington Springs; Julian Solem, county agent, secretary.

Fred Lucas, Academy, and Hiram Dimick, Academy, are the two appointed supervisors in the Academy district in northern Charles Mix county. An election of three additional supervisors will be held in December.

Officer Changes Announced

Recent changes in district supervisors include: Arthur Schaffer, Box Elder, to succeed Robert Roth, deceased in the Elk Creek district; Charles McCormack, Valentine, Nebraska, to replace John B. Larson, resigned, Rosebud district; Emil Buckholz, Avon, as assistant supervisor during military absence of William Sterak, Scotland district. In the Pennington district the supervisors recently elected were: E. J. Carstenson, Owanka; Lloyd Coleman, New Underwood; and Ralph Kopp, Box Elder. In the Tri-County district at Faith, the oldest district in the state, the second re-election was held October 29. J. M. Heimer, Faith; Alvin Anderson, Faith; and Joe Hlvaka, Plainview, were reelected.

Contour Farming Pays

Although South Dakota is a comparatively new state in agriculture, much of its soil already is losing its productivity, and many acres of land have been injured by wind or water erosion.

DAKOTA ZEPHYR

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CONSERVATION ASSOCIATION OFFICERS

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FIND CONTOURS EASY TO FARM

A Report on Subsurface Tillage

Hecla, S. D.—Yield tests were taken this summer on two cooperators' farms in the Brown-Marshall district who carried on sub-surface tillage trials. The results are summarized as follows:

On the Carl Beck farm, part of a 1942 cornfield was tilled with a sub-surface tillage machine and the balance of the field was prepared for seeding with an ordinary disc. The whole field was planted to wheat, with yields as follows: 17.2 bushels (test wheat 56 pounds) on the land which was subsurface tilled, and 13.7 bushels (test wheat 56½ pounds) on land prepared with the ordinary disc.

Reduces Flax Yield One Bushel

On the Ernest Koch farm, 1942 flax ground was also seeded to wheat this year, part being tilled with a plow and part with a sub-surface tillage machine. The land prepared with a plow had a test yield of 14.4 bushels per acre and the part prepared with the sub surface tillage machine yielded 13.2 bushels. The test weight in both instances was 56 pounds.

Results of one year's trials with sub-surface tillage are not to be considered conclusive because weather conditions and time of the tillage operation varies a great deal. Sub-surface tillage is new and some phases are still in the experimental stages. However, the following advantages are apparent at this time:

- Increased capacity of the soil to absorb water
- Reduces the amount of runoff water
- Reduces water and wind erosion
- Reduces the rate of surface evaporation
- Makes unfavorable grasshopper egg laying areas

The most recent experimental results indicate that two sub-surface tillage operations are necessary in preparation of land for seeding small grain. The first operation should be done during the month of August or as soon as a crop is threshed. This operation is to be done shallow (1 to 2 inches deep) so as to kill weeds and aid in germinating additional weed seed. Then the second operation can be done late in the fall or early in the spring before seeding, at about the same depth as plowing. Recent experiments indicate that use of a sub-surface packer such as a rotary hoe used after the tillage operation and before seeding is a desirable practice to follow.

Makes Uncrossable Gully Into 100-foot Grass Waterway

Beresford, S. D.—Tilman Nelson, who farms seven miles north of here is through driving around a gully that had washed out in one of his large cultivated fields.

With the assistance of the Lincoln Soil Conservation district Nelson decided to have this gully bladed in and then seed it down to a permanent grass to keep it from washing out again.

During September, 1943, a crawler-type tractor and bulldozer was moved to this farm and began to fill the gully. After twelve hours of actual work Nelson said the field looked like it did 30 years ago. In place of a gully with steep banks he had a waterway approximately 100 feet wide.

Immediately Mr. Nelson seeded this waterway to a permanent grass, intermediate wheatgrass. The soil remained dry until the forepart of October. By mid-October the grass was coming up. With favorable weather conditions this waterway will be ready to handle the spring rains and supply a crop of hay from land that was previously wasted.

Contour Farming Pays

The annual loss to the American farmer from erosion alone is estimated at four hundred million dollars a year.

Lyman District Completes Near 90 Agreements

Kennebec, S. D.—The American Creek district in Lyman county has now completed almost 90 agreements this year. In addition, they are doing as much contouring, gully control work and tree planting on old agreements as they do on the new ones.

As the program gets older and the practices more successfully understood, the older cooperators come in and demand more assistance on their farms. For example, considerable contouring was laid out this year on farms that were originally signed up when the district was started in 1939.

Ninety-five dams have been constructed in this district during 1943, totalling 89,161 cubic yards. There are now 14 subsurface tillers owned by farmers in the district. These have subsurface tilled approximately 7,500 acres this fall.

Farmers in the district are showing more and more interest in gully control. Experimental work is being done trying to discover what type of equipment is most suitable for gully control work. The district has tried the crawler-type tractor with a township blade, the county highway maintainer, a tractor and a disk plow. They are also trying to use a small tractor equipped with a scraper.

Subsurface Tillage Proves Value

Chamberlain, S. D.—Sub-surface tillage and surface planting of corn in a stubble mulch are proving very satisfactory on Frank Havlik's Brule county farm. He has a field that was half listed and the other half planted in a subsurface tilled area so he is able to make accurate checks and observations.

The outstanding benefits for the sub-tilled land are that there is less runoff, less soil loss and a better stand of corn.

The entire field was in barley in 1942 and was subsurface tilled once last fall. This spring the field to be surface planted was subtilled once, the other field was planted with the lister. Both fields received only two cultivations due to interference in the cultivation schedule from rain. The listed field is a little more weed-free than the sub-tilled field.

Four inches of rain fell on these fields during 24 hours in June soon

after the first cultivation. The listed field suffered from heavy runoff and loss of water and soil. About 30 percent of the listed corn was washed out from this and other rains. The sub-surfaced cornfield, with the protective cover of straw mulch remaining on the surface, lost very little soil or water.

The advantages to be obtained from sub-surface tillage are due to the heavy mulch which this practice leaves on the surface of the soil. Wind and water erosion are reduced, soil losses are minimized and the rate of evaporation retarded.

Havlik has been following the practice of sub-tillage for three years. He recently stated, after observing the manner in which the practice saved soil and water, "I wish all my land was sub-tilled." He employs a sweep-type blade on his cultivator to keep the crop residue on or near the surface.

'Will Not Go Back to Old Farm Methods'

Alcester, S. D.—Bigger yields, ease of operations, checking of erosion—these are the things which, he declares, have shown John Wiksen, 6 miles east of Alcester, that conservation farming is the most profitable.

"No one will ever get me to go back to the old ways of farming," he said. "Conservation farming keeps the soil on the fields where it can produce crops, and saves the moisture we get instead of letting it run off.

"For instance, last year my contoured corn made nearly 70 bushels an acre, I don't believe a better crop was ever raised here, not even just after the land was first broken."

"On some of the rows," Wiksen pointed out, "I can make only one round with a planter full of corn. And when it comes to picking the corn, the horses pull 40 to 45 bushels of corn without trouble, while up and down hill they couldn't handle more than a small fraction of that."

The almost complete absence of washing impresses Wiksen. This year, he said, one of his friends told him that the runoff had washed such ditches in his up and down hill corn rows that they bounced the tractor terrible when he drove across them. On his land, Wiksen said, the fields are smooth and there was no such jolting of equipment.

"Another thing people often forget," Wiksen said, "is the way conservation farming keeps land good. Where one farms up and down hill he has to try to manure all of the land, but with the land contoured the soil stays in place.

"Then when a person has some poor spots, he can put the manure there. That surely saves a lot of work. On my farm, the crop is uniform, the same on the slope as on the more level hilltops and bottom land. Then, too, manure put on a contoured field stays there, instead of washing away."

"When I get all of my pastures seeded, I'll have more beef cattle, too," Wiksen concluded. "From the experience I've had with brome grass and alfalfa, I'm sure that I'll produce just as much as ever and with less work, because I'll not have to raise so much in cultivated feed crops.

"Then, too, conservation farming, with the proper crop rotations will keep the farm good—yes, let me build it up. It's the most profitable way to farm."

VERMILLION DIKES EFFECTIVE

Flood Destroys 6,000 Bottom Acres Last Year

Wakonda, S. D.—Dikes recently built to prevent the Vermillion river from flooding valuable Clay county cropland have been very effective this year. In 1942 more than 6,000 acres of good bottom land were flooded after the crops were planted and the area suffered a complete crop failure due to the excess water.

This year less than 10 percent of the area was under water and the balance produced excellent crops.

More than 20 miles of dikes have been built since a year ago to protect fields of 33 different farmers cooperating with the Clay County district. The fact that the river was higher in 1943 than it was when it flooded last year is evidenced by a statement by Herman Nelson who said that the river was higher at his bridge than he had ever known it to be. Further proof that water of flood proportions rushed down the river this year but was held in the river channel by dikes is furnished by Emmanuel Johnson. He stated that he waded in water to his knees where there had never been water before in previous years.

Cultivate Following Cloudburst

The Bixler brothers had 110 acres on the bottom protected by dikes which were erected in April. These dikes really kept the water out of the fields and three days after a cloudburst they were cultivating corn in an area that last year was a complete loss. The newly constructed dikes held out the river and creek overflow satisfactorily.

Creeping Jenny Has Sam on Run; Crested Wheat Saves the Day

Piedmont, S. D.—Ever hear of creeping jenny? Sam Weirenga, farming in the Elk Creek Soil Conservation district has, too. He had an 80-acre field which the jenny monopolized so completely that Sam's crops couldn't even get a start before the bindweed strangled them. He was forced to abandon the field.

Finally, in desperation Mr. Weirenga sowed a 30-acre strip to crested wheatgrass. That was three years ago. The next year he sowed another 30 acres and last year he finished the job. The first 30-acre sowing never hesitated. It made a good stand the same year it was seeded, and now, three years later, the grass has crowded the jenny out so thoroughly that scarcely a plant can be found.

From Jenny to Hay

That strip yielded 30 tons of hay this year. The other two strips have not made such rapid progress, but the grass on them has been permitted to reseed and in another year or two they will no doubt compare favorably with the original sowing.

Mr. Weirenga concludes that after his grass has been established for about a five-year period he could, if he desired, plow it under and farm the ground for several years before the jenny re-established itself to the point where he would have to choke it down again with grass. However, his present plans do not include plowing up the grass as he needs the hay and pasture which it provides.

17 Owners Cooperate To Build Mile Ditch

Springfield, S. D.—Emanuel-Choteau Creek Soil Conservation district has just completed the construction of approximately 5,000 lineal feet of drainage ditch on Missouri river bottom land in Rouse township of Charles Mix county.

There are approximately 17 owners of land within the project. Each one of the owners contributed on the proportionate basis to the total cost of the project, according to the number of acres that each individual owned. It is estimated that between 1,500 and 1,600 acres of bottom land will be benefited by the construction of this ditch.

The drainage ditch was constructed by a private contractor from Sioux City, Iowa, using two 90 horse-power tractors equipped with a 15-cubic yard wheel scraper and a 11-foot bulldozer. In addition to the construction of the drainage ditch, this contractor has already constructed approximately 20 dams for the district. There is some obligated work to be completed such as the construction of another small drainage ditch, approximately 500 lineal feet of dike, and four or five more stock water dams.

This is the first year that Emanuel-Choteau Creek Soil conservation district has used privately owned equipment for the construction of dams and drainage ditches on a contract basis. The board of supervisors are well pleased with this method of enlisting private enterprise for the placing of conservation practices on the land.

They Laughed First—Now He's Laughing

Watertown, S. D.—Farming on the contour was tried as an experiment on the Ted Peters farm in Elmira township, Codington county but, according to Mr. Peters, after the corn was harvested this fall it will be a regular practice from now on.

After absorbing the usual amount of "ribbing" by neighbors on his ability to plant crooked rows of corn around a hill, he now has the last laugh as his 45 acres of hybrid corn planted on the contour is acclaimed by the neighbors as being by far the best in the community.

Yield 40 Bushels

Two beating rains of near cloudburst proportions and a hail during the season have tended to reduce the yield, however, in spite of these handicaps the field averaged 40 bushels per acre.

According to Mr. Peters, there was no noticeable runoff from this field even after the heavy rains, however, if it had not been cultivated on the contour considerable damage would have been done to the corn and much loss of topsoil would have resulted.

Contour Farming Pays

District Builds 24 Dams

Rapid City, S. D.—To date in 1943, there have been constructed by the Elk Creek Soil Conservation district 24 stock water dams containing in their fills a total of 40,000 cubic yards of earth, making an average of 1,667.